Bayou Meto Basin Project

Protecting Our Waterfowl and Water Resources for Generations to Come

Contents

History

The Bayou Meto Basin is a highly productive area for both agriculture and waterfowl. The Bayou Meto Wildlife Management Area is world renowned for waterfowl hunting and is a very important wintering habitat for mallards. However, the inability to manage water has resulted in prolonged flooding of the bottomland hardwood forests and is threatening productivity.

Groundwater is the lifeblood of eastern Arkansas. The alluvial aquifer, which provides essentially all the water used for agricultural irrigation and fish farming, will be completely lost by 2015 if measures to protect and conserve this resource are not taken. Depletion of the alluvial aquifer will change agriculture as it is presently practiced and will result in catastrophic economic losses for the entire region.

Other water resource problems include poor drainage in the lower portion of the Bayou Meto Basin and along the upper Bayou Meto, agricultural flooding and loss of environmental resources in the Bayou Meto area.

Scope of Project

Diverse environmental and engineering teams were assembled to identify the concerns and possible solutions for the Bayou Meto area:

- *Bayou Meto Water Management District*
- *U.S. Army Corps of Engineers*
- *Natural Resources Conservation Service*
- *Environmental Protection Agency*
- *Ducks Unlimited*
- *Arkansas Game and Fish Commission*
- *Arkansas Natural Heritage Commission*
- *Arkansas Soil and Water Conservation Commission*
- *Arkansas Department of Environmental Quality*
- *The Nature Conservancy*

The goal was to develop a comprehensive improvement plan to meet the varied interests and objectives of flood control, groundwater protection and conservation, agricultural water supply, waterfowl management, ecosystem restoration and environmental enhancement.

Project Components

Aquifer Protection and Agricultural Water Supply

Tailwater recovery system

Flood Protection

Ecosystem Restoration & Improved Waterfowl Management

Aquifer Protection and Agricultural Water Supply

To protect the aquifer without devastating the economy, groundwater use must be reduced to a sustainable level.

- ***Groundwater studies*** *conducted by the U.S. Geological Survey indicate that groundwater can provide only 22% of the total agricultural water needed without further damaging the aquifers.*

- ***On-farm conservation and storage improvements*** *– Cost-share would be available for on-farm improvements to collect, store and transport surface runoff for reuse on the farm.*

- ***Imported water*** *– In the tentatively selected plan, a pumping station will be built on the Arkansas River just upstream of the David D. Terry Lock and Dam at River Mile 109. Water will be transferred via a network of new canals, pipelines and existing ditches to area farms.*

Flood Protection

Flood protection is an important component of the project. Flooding damages occur frequently adjacent to the many streams throughout the Bayou Meto Basin. One of the area's greatest needs is relief from flooding and improving drainage in the lower portion of the basin, including the Wildlife Management Area, as well as along low lying areas in the upper Bayou Meto.

A plan has been tentatively selected that will balance the needs of flood protection and the environment. Features to reduce flooding, improve drainage and enhance water management include channel improvements, water control structures and a pumping station:

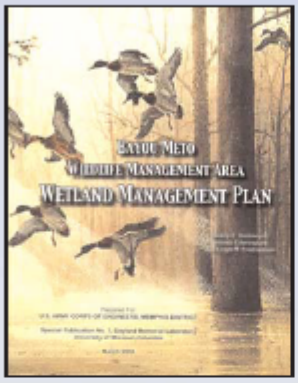
A pump station located at the outlet of Little Bayou Meto, operating in conjunction with the channel improvements, will significantly reduce flooding and allow for better water managment for waterfowl in the Bayou Meto Wildlife Management Area and the lower portions of the basin.

Ecosystem Restoration and Improved Waterfowl Management

Aquifers are a great, unseen resource that interact with wetlands, streams and rivers. Protection of the aquifer is essential for a complete and functioning ecosystem.

The waterfowl management portion of the tentatively selected plan was developed with the goals of improving existing habitat conditions within the Basin through improved water management practices and increasing available habitat through the restoration of thousands acres of prairie (including prairie wetlands) and thousands of acres of bottomland hardwood forests.

Additional Publications

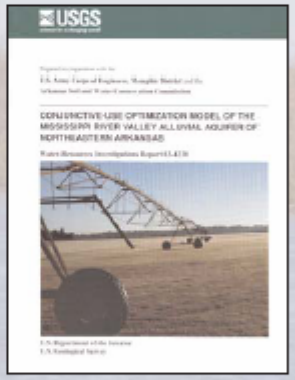


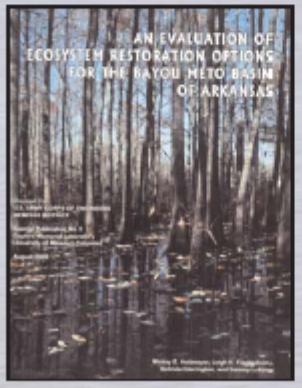
Wetland Management Plan for Bayou Meto Wildlife Management Area.

- Gaylord Memorial Laboratory, University of Missouri, Columbia, 2004

Water Resource Investigative Report for Northeastern Arkansas.

- U.S. Geological Survey, 2003





Evaluation of Ecosystem Restoration for the Bayou Meto Basin.

- Gaylord Memorial Laboratory, University of Missouri, Columbia, 2002

What others are saying

"In the name of waterfowl and duck hunting, it's the place to go in the United States. People all over the country look to the Bayou Meto Area as the largest green timber area that's open to the public."

- Scott Henderson
Director, Arkansas Game and Fish Commission

"This area is unique, it's large and world famous."

- Mickey Heitmeyer
Gaylord Memorial Laboratory, University of Missouri

"What can we do today to make it fulfill all our needs? Not only our agricultural needs, but our needs for wildlife, needs for ecosystem maintenance and our needs for living in a place we care about."

- Tom Foti
Chief of Research
Arkansas Natural Heritage Commission

"This is the only project I've seen where they're going to do a lot of conservation at the beginning of the project."

- Mike Freeze
Fish Farmer, Arkansas Game and Fish Commission

"We're about to get to the point of no return."

- Bob Bevis
Farmer, Bayou Meto Basin

FAQs

Is the groundwater depletion problem truly serious?

Yes. *Several studies have been conducted over the years, beginning when the problem was first recognized in the 1940s. Recent studies by the Corps of Engineers, U.S. Geological Survey, Natural Resources Conservation Service, several universities, and the State of Arkansas have all confirmed a critical groundwater problem in the Bayou Meto Basin.*

Will the project protect the aquifers?

Yes. *The proposed Bayou Meto Basin Project will help save the aquifers. The tentatively selected plan uses the groundwater at a safe yield, which is the amount that could be pumped without further depleting the aquifers.*

Were the project components planned to function separately?

No. *The 3 components of the project were planned as a whole. All parts are interrelated. Some examples include the need for a pumping station and channel work on Little Bayou Meto to provide both flood control benefits and relieve the stress on the timber from too much water in the growing season. Another example would be the import water system, which would also provide water when needed for flooding waterfowl habitat.*

How long will it take to pay for the project?

If the proposed project is financed with 30-year bonds, the project will be paid for 30 years after the final year of construction. Construction is scheduled to be completed in six years with the project being paid for in 36 years. Once the project is paid for, funds from the sale of water will be used for the operation and maintenance.

For further information:

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Bayou Meto Project & Wildlife Management Area